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**BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN**

In the Matter of:)	
)	
MCI Telecommunications Corporation)	
)	Docket Nos. 6720-MA-104
Petition for Arbitration)	3258-MA-101
Pursuant to Section 252(b) of the)	
Telecommunications Act of 1996 to)	
Establish an Interconnection Agreement)	
with Wisconsin Bell, Inc.)	
d/b/a Ameritech Wisconsin)	

**REBUTTAL TESTIMONY OF GREGORY J. DUNNY
ON BEHALF OF AMERITECH WISCONSIN**

1 Q: PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

2
3 A: Gregory J. Dunny, 350 North Orleans, Chicago, Illinois 60654.

4
5 Q: HAVE YOU PREVIOUSLY SUBMITTED DIRECT TESTIMONY IN THIS
6 PROCEEDING?

7 A: Yes.

8
9 Q: WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

10 A: I will respond to certain issues raised by the direct testimony of MCI witnesses
11 Marzullo and DeHorn that were not addressed or not fully addressed in my direct
12 testimony. In addition, in arbitrations with Ameritech in other states MCI has
13 significantly expanded and revised its contract requests after filing its petition for
14 arbitration. Anticipating that MCI may do the same in Wisconsin, and realizing that

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1 this is the last opportunity to submit written testimony, my rebuttal testimony will also
2 address the new issues raised by MCI's revised requests.

UNBUNDLED LOOP DISTRIBUTION

5 **Q: COULD YOU EXPLAIN IN DETAIL WHY AMERITECH OPPOSES MCI'S**
6 **REQUEST FOR LOOP DISTRIBUTION AS AN UNBUNDLED NETWORK**
7 **ELEMENT?**

8 **A: Yes. Although I touched briefly on this issue in my direct testimony, it has been**
9 **addressed at the hearings in other states, so I would like to take the opportunity to**
10 **fully address it here. Exhibit ____ (GJD-3) is a diagram showing the relevant portion**
11 **of the network, which may help illustrate my discussion.**

12
13 MCI proposes to obtain access to unbundled loop distribution at an Ameritech cross-
14 connect point, which is the point where a feeder from an Ameritech central office is
15 connected to the distribution portion of the loop. MCI would then disconnect the
16 distribution plant from the Ameritech feeder and connect that plant to its own feeder,
17 which would be connected to an MCI switch. Once the customer who is switching to
18 MCI has his feeder disconnected, he no longer has any connection to the Ameritech
19 central office.

20
21 Ameritech believes that any request for loop distribution, or for any other sub-loop
22 element, must be addressed through the Bona Fide Request (BFR) process due to the
23 complexity of the issues that arise with any such unbundling. In particular,

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1 unbundling of loop distribution would give rise to difficult engineering, pricing, and
2 competitive issues.

3
4 **Q: WHAT ENGINEERING CONCERNS ARISE WITH UNBUNDLING OF LOOP**
5 **DISTRIBUTION?**

6 **A:** Although unbundling of loop distribution would, for the most part, generally be
7 technically feasible, it still would create a number of engineering difficulties. For
8 example, there is the question of how Ameritech could test and repair a loop that is
9 no longer connected to its end office. In the normal situation, Ameritech knows when
10 it has a bad cable pair and testers can come into the central office and connect their
11 equipment to the mainframe to run tests on the entire loop between the end office and
12 the end user. However, when Ameritech is only providing distribution plant to MCI,
13 it would have to come up with procedures to allow it to test that portion of the loop
14 from the point of interconnection. This likely would require a more lengthy repair
15 process (perhaps giving rise to parity issues or issues regarding the appropriate repair
16 benchmarks), different types of tests, or different testing equipment. A BFR is
17 necessary to determine how all of this would work.

18
19 **Q: ARE THERE ANY OTHER ENGINEERING CONCERNS?**

20 **A:** Yes. Consider the situation when an MCI local exchange customer who has
21 purchased unbundled loop distribution (whom I will call Customer X) decides to
22 switch from using MCI as her local exchange carrier to using another company, such

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1 as AT&T or MFS. In a normal situation, i.e., where Customer X had purchased a
2 regular unbundled loop from MCI and was connected to MCI at MCI's collocation in
3 Ameritech's end office, we would simply disconnect the jumper wire from the MDF
4 to MCI and connect a jumper wire to the other carrier's collocated equipment. This
5 is the normal method by which all carriers will gain access to unbundled loops on a
6 non-discriminatory basis. With unbundled loop distribution, however, there is no
7 simple way to switch Customer X from MCI to her new LEC because there is no
8 connection between Customer X and the Ameritech end office where the other
9 carriers are collocated.

10
11 **Q: ISN'T THERE SOME WAY A CUSTOMER COULD RE-ESTABLISH A**
12 **CONNECTION TO THE AMERITECH CENTRAL OFFICE, AND THUS GAIN**
13 **ACCESS TO THE OTHER CARRIERS WHO ARE COLLOCATED THERE?**

14 **A:** There are three options for doing so, but they are impractical and involve delays and
15 increased costs. First, if there is excess capacity in the feeder plant, Ameritech could
16 re-establish a link between the distribution and the feeder. This, however, would
17 require Ameritech to do the work necessary to identify the spare feeder wire and to
18 perform the manual changes necessary to re-establish the connection. Such manual
19 work could delay a change in carriers by a few days, whereas if the customer were
20 still connected to Ameritech's central office, she could switch to the new carrier in a
21 much shorter period.

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1 Second, if there is no excess capacity in the feeder, Ameritech could "reinforce" the
2 feeder by adding capacity, but that requires physical construction and the addition of
3 new lines. Such manual construction work could take months, and would
4 undoubtedly substantially increase the costs of switching. Further, there is the
5 question of who will pay those costs.

6
7 In my opinion most customers would not be willing to wait days or months to switch
8 local carriers -- it's simply too inconvenient. As a result, MCI, by using unbundled
9 distribution rather than a complete unbundled loop, would have created a barrier to its
10 customers changing to another LEC.

11
12 A third option, in theory, would be for Ameritech to "reserve" the disconnected
13 feeder plant for Customer X in case she later decides to leave MCI, but this too
14 creates more problems than it solves. For example, who will pay the cost of
15 reserving the feeder? Would MCI be required to do so by paying the cost of a
16 complete unbundled loop? Also, how many loops could Ameritech be required to
17 preserve? If all carriers could purchase unbundled distribution plant, Ameritech could
18 end up with thousands of reserved feeder lines that may never be re-used, yet still be
19 forced to expand its feeder plant to accommodate new growth. That does not strike
20 me as an efficient or fair outcome. Rather, as a matter of reasonable business
21 practice Ameritech must be able to reuse the feeder, perhaps by assigning it to a new
22 loop, rather than letting it lie fallow.

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1 **Q: WON'T THERE ALWAYS BE SPARE CAPACITY IN THE FEEDER PLANT?**

2 **A: No, and this illustrates an important difference between how feeder plant and**
3 **distribution plant are engineered. Distribution plant is engineered and constructed to**
4 **meet the "full built-out demand" for the area served by a cross-connect box. By this**
5 **I mean that Ameritech engineers the distribution plant to accommodate the full**
6 **demand for service for 20 years into the future. Hypothetically speaking, if we find**
7 **that the average home in a subdivision served by a cross-connect currently uses two**
8 **phone lines, we might install distribution plant that would accommodate four or five**
9 **lines per house. Our engineers do this because it's more efficient to have the lines in**
10 **the ground and ready to go than to have to dig up the equipment and add a line every**
11 **time a customer gets a modem or a home office number.**

12
13 **Feeder plant, by contrast, is engineered using different parameters, and is built to**
14 **meet current demand plus a limited period of future growth, say, one to two years.**
15 **For feeder plant, which can be reinforced more frequently than distribution plant, this**
16 **is a more economic and efficient course. As a result, however, it is much less likely**
17 **that at any given time there will be spare feeder plant as opposed to spare distribution**
18 **plant.**

19
20 **Q: HOW IS MCI'S PROPOSAL ANTICOMPETITIVE?**

21 **A: As explained above, when Customer X wants to switch from using MCI as her local**
22 **exchange carrier to using another company, such as AT&T or MFS, those carriers**

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1 will not have any way of directly connecting to Customer X because once MCI
2 disconnected Customer X's feeder link to the Ameritech central office. Thus, MCI's
3 proposal would "lock-in" its customers who purchase unbundled distribution by
4 preventing them from later changing to another carrier without severe inconvenience
5 and possibly increased costs.

6
7 **Q: WHY COULDN'T THOSE OTHER CARRIERS SIMPLY COLLOCATE IN**
8 **THE MCI OFFICE AND OBTAIN A CONNECTION TO THE CUSTOMER**
9 **THAT WAY?**

10 **A:** There are several reasons why, in the real world, that will never occur. First,
11 because MCI is not an incumbent LEC, the Act and the FCC's First Report and
12 Order ("Order") do not require it to allow other carriers to collocate their equipment
13 on its premises. Further, because those carriers will be its direct competitors, MCI
14 would have no incentive to allow such collocation -- indeed, the incentive would be to
15 keep them out. Second, even if MCI would allow such collocation, other carriers
16 would have little incentive to collocate in MCI's premises to gain access to customers
17 who purchased unbundled distribution from MCI unless there were a large enough
18 number of customers to justify the investment. Thus, such customers would truly be
19 "stranded" at the MCI office.

20
21 **Q: COULD YOU BRIEFLY SUMMARIZE AMERITECH'S POSITION ON**
22 **UNBUNDLED LOOP DISTRIBUTION?**

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1 A: Yes. Although unbundling of loop distribution is, for the most part, generally
2 technically feasible, it raises a number of engineering, pricing, and competitive issues
3 that counsel against requiring it as part of the interconnection agreement. Rather, any
4 sub-loop unbundling must be pursued via the BFR process, where these complex
5 issues can be addressed in more detail.

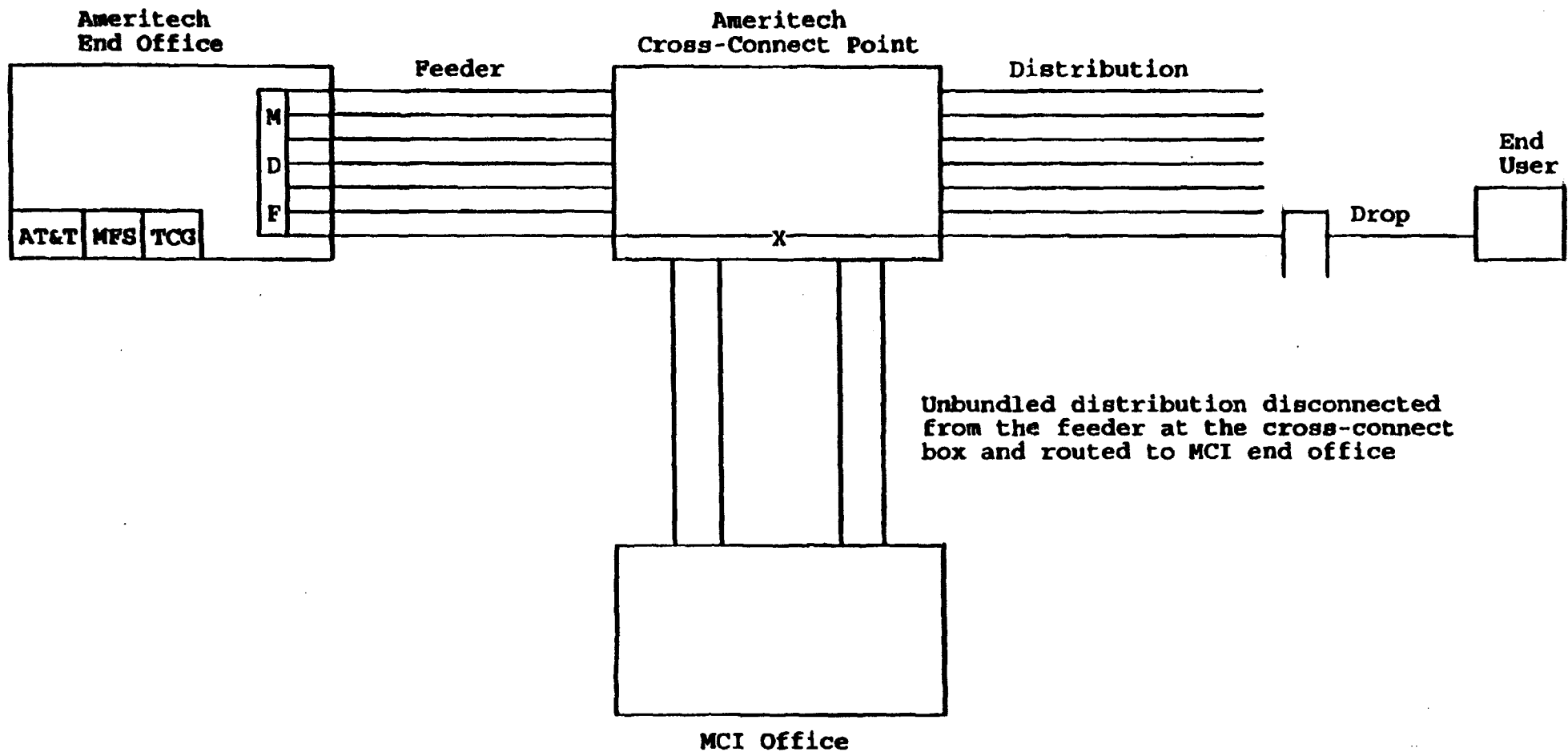
7 **UNBUNDLED DARK FIBER**

8 Q: **IN YOUR DIRECT TESTIMONY YOU STATED THAT YOU DID NOT**
9 **BELIEVE "DARK FIBER" WAS A NETWORK ELEMENT THAT HAD TO BE**
10 **UNBUNDLED AT MCI'S REQUEST. WOULD YOU CARE TO ELABORATE**
11 **ON THIS ISSUE?**

12 A: Yes, given MCI's continued request for dark fiber, I would like to explain my
13 position in more detail. The Act defines a "network element" as follows:

14 [A] facility or equipment used in the provision of a
15 telecommunications service. Such term also included features,
16 functions, and capabilities that are provided by means of such
17 facility or equipment.

18 (Act, § 3(45)). Dark fiber, however, is not currently "used in the provision of a
19 telecommunications service." Dark fiber also is not able to be used on a stand-alone
20 basis for communications and cannot, by itself, provide "features, functions, or
21 capabilities." As I explained in my direct testimony, "dark fibers" are unequipped
22 fiber optic strands -- that is, hair-thin glass fibers with no electrical/optical equipment
23 associated with them. "Dark" refers to the absence of the electronic equipment that is
24 said to "illuminate" the fiber. Because there is no attached electronic equipment, dark
25 fiber is not used to provide a telecommunications service or any feature, function, or



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Docket Nos. 6720-MA-104
3258-MA-101
Exhibit (GJD-3)
Page 1 of 1



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Issues Concerning the Providing of Unbundled Subloop Elements by Ameritech

16 May 1996

Introduction and Background

This report, based on an analysis of the Ameritech network, identifies issues in providing unbundled subloop elements. Unbundling of any element must be approached cautiously to maintain network integrity, ensure reasonable service intervals, and manage costs. Because of the multiplicity of possible subloop elements, the unknown demand for subloop elements, and the wide variation of loop plant characteristics, providing subloop elements is particularly complex. Because of these and other factors (described below in detail), subloop unbundling should be approached with caution, if at all. If regulators determine that such unbundled subloop elements are required to promote competition, an examination of each subloop request on a case-by-case basis should occur.

Outside Plant Design Considerations

In order to understand the implications of unbundled subloop elements, it is necessary to examine the outside plant that provides telephone loops in companies such as Ameritech. A loop consists of a transmission path between the network interface (NI) located at the customer's premises and the main distribution frame (MDF) or other designated cross-connect facility in the Central Office (CO). Loops are defined by the electrical service interfaces they provide rather than by the media or technology used to provide the loop facility.

The loop network, or Outside Plant (OSP), is comprised of feeder and distribution plant. The feeder portion can consist of traditional copper from the MDF to the feeder distribution interface (FDI), such as a Serving Area Interface (SAI) or other metallic cross-connect fixture. Also, it may consist of copper- or fiber-fed digital loop carrier (DLC), which produces derived cable pairs as feeder to the FDI. The feeder pairs, or F1 pairs, are cross-connected to the distribution pairs, or F2 pairs, at the FDI. In some cases, as with downtown high-rise buildings or other customer locations that have large service demands, the copper cables serving these locations extend directly from the MDF to the NI inside the building without any intermediate cross-connect facility.

The geography served by the outside plant is segmented into areas that have common transmission characteristics and design criteria (e.g., length and wire gauge requirements). Each feeder route emanating from the central office provides loop facilities for many of these geographic segments. The distribution and feeder plants are planned to accommodate service demand forecast for the area served with the appropriate capacity and technology. The geographic segments of the OSP are the fundamental components of the loop network.

The CO provides the logical location at which to establish standard repeatable processes to accomplish interconnection in an equitable and efficient manner. Standard electrical characteristics are typically at the MDF which is planned and designed to facilitate connecting loop facilities to different network resources, such as the local serving switch, interoffice facilities or other network elements. Due to this loop design, the MDF (or other cross-connect facility) in the CO provides the natural location to direct unbundled loops to switching facilities or other network elements of certified local exchange companies (CLECs).

Therefore, provisioning entire unbundled loops, that is, loops originating at the MDF and terminating at the NI is a reasonable method for offering the use of existing facilities to market entrants, for which intensive capital investment is infeasible or impractical. In fact, Ameritech began offering use of unbundled loop facilities in Illinois and Michigan in 1995; projections indicate that by year end 1996, over 45,000 Ameritech loops will be used by CLECs with a projected ongoing growth rate exceeding 100% per year.

In contrast to the unbundling of complete loops, subloop unbundling would raise a variety of additional issues concerning planning, network architecture, operational processes, and operations support system capabilities. Careful planning on these issues is required to maintain the integrity, reliability, and security of the network.

Planning Issues

The demand for unbundled subloop elements is unclear. The engineering, provisioning, and pricing of unbundled subloop elements will depend on the projected market demand for specific subloop elements. Since there is no historic data in the Ameritech region (or other areas) for quantifying demand for subloop elements and, in general, no clear statements of intent or commitment to subscribe to specified volumes of subloop elements, projecting market demand for such elements is highly speculative.

Network Architecture Issues

To assess the feasibility of unbundling loop facilities into subloop elements, the variability of the OSP must be considered. The predominant loop designs present in the Ameritech network include approximately 12% of loops served via DLC, 73% of loops provided via FDLs, and 27% of loops fed directly from the MDF to customer sites without FDLs (numbers approximate; the total exceeds 100% because DLC loops also have FDLs).

Subloop interconnection is unavailable on 27% of Ameritech loops. Subloop unbundling is possible for the 27% of loops that are directly connected via copper cables. For the remaining loops, while a DLC or FDI location may seem to afford a possible site for interconnection, several factors mitigate against this as a standard policy.

The following examples illustrate specific implications of interconnection at the subloop element level:

Many existing SAJs are not capable of handling subloop interconnection. SAJs are implemented to provide feeder to distribution connection for a specific geographic serving area containing an identifiable number of living units or other customer sites with a specific forecasted service demand. Each SAI is designed to provide a specific feeder to distribution ratio that is appropriate for the area served. The SAI is sized to afford termination of the total number of feeder pairs and distribution pairs needed based on the expected service demands of the area served. In many cases, SAJs are ordered from the manufacturer with cable pairs preconnectorized and terminated in the factory.

SAJs can be pole mounted (if the size of the "box" permits) or ground mounted on a concrete pad. In either case, provision for the entry of a specific number of cable sheaths is provided. Typically, the full complement of cables that can enter are provided upon initial installation and extended to locations in the feeder and distribution portions of the loop.

If a CLEC required access for some number of facilities to this cross-connect fixture, it is probable that the whole SAI would need to be replaced to provide this increase in cross-connect capability. As there is a size restriction for pole mounted fixtures, it is possible that replacement may involve relocation of the fixture to a new site with a concrete pad. Additionally, appropriate engineering, construction, and acquisition of right-of-way may be needed to move the fixture.

In the case of a pad mounted fixture, a determination of the best method for replacement would be required. This may depend upon the particular supplier's fixture design, the age of the fixture, the overall condition of the fixture and cross-connections inside, the type of splicing methods used (e.g., connectorized or not), the size of concrete pad, the number of conduits provided for cable entry, the amount of slack that can be provided for the entry cables, and several other possible considerations including how large the new fixture should be.

In addition, the number of CLECs that should be afforded access to the replacement fixture is unknown, as is the number of cross-connections to be provided for each one. This complicates the issues of cost recovery for all involved parties.

In Illinois, Ameritech has in excess of 24,000 above ground cabinets and 240 Controlled Environment Vaults (CEVs) with additional sites being installed each year. The effort to rebuild even a small fraction of these sites would be significant.

Space and interoperability issues limit existing Remote Terminal (RTs) capability for subloop interconnection. RT sites are custom designed and configured for specific vendor equipment and specific service requirements. For example, one vendor's above ground cabinet can provide a maximum of 2016 derived lines. The space within this cabinet is fully utilized by the vendors' own transmission equipment, related support equipment (e.g., power equipment, batteries, protection) and existing feeder and distribution terminations.

In the case of CEVs, 16- and 24-foot long versions are available. The CEV size is selected based on the service demands of the area to be served and space requirements of contained equipment. Typically these units are pre-assembled at a factory prior to being shipped to a job site. As the cost of these units is very high, all available space inside the CEV has a planned use (e.g., each shelf in each equipment rack is designated for use). As a result, there typically is no undesignated space remaining to afford a CLEC the opportunity for entry.

Even if space in an RT were available, there are still significant technical and cost issues to be considered. DLC systems are specifically designed for a single provider network. More specifically, they are designed to operate in concert with a single CO-based unit (e.g., switch or central office terminal). Therefore, if space for a CLEC to place equipment capable of providing standard DS-1 interfaces to the Incumbent Local Exchange Carrier's (ILEC) RT were available, the majority of current RTs would not be equipped to interoperate with CLEC CO equipment.

Subloop unbundling causes new plant to be oversized. The administrative issue of cost recovery and sizing of new loop plant elements in ongoing normal construction programs is also a concern. The ILEC may be required to routinely increase the capacity (and therefore the cost) of each and every new SAI and DLC Remote Terminal introduced to the loop network by a factor based on speculative forecasts.

Subloop unbundling limits modernization of the outside plant. ILECs have been developing plans for the deployment of fiber-based broadband networks to provide multiple services, including voice telephony, high-speed interactive data, and video. These fiber-based networks also provide increased network integrity by replacing the more trouble-prone copper plant. This network modernization may be severely limited by the provision of subloop elements. If an interconnector has access to subloop elements in the copper plant, modernization of the plant to fiber could not be accomplished unless the interconnector was willing to discontinue use of its copper subloop elements. Therefore, subloop elements have the potential to freeze the outside plant technology.

Subloop unbundling increases the likelihood of incompatible signals. The deployment of certain technologies is impacted by the presence of existing technologies in the loop plant. For example, Asymmetric Digital Subscriber Line (ADSL), used for Video Dial Tone and Internet access, cannot coexist with T1 line loops inside the same binder group of a copper cable. Spectrum compatibility guidelines are administered to prevent this from occurring at the time of provisioning. If the subloop is unbundled, there will be no way of preventing multiple providers from deploying incompatible technologies and no way of managing their deployment in the loop plant. Therefore, new and existing services may be degraded by subloop unbundling, and costly ongoing rearrangements may be necessary to restore service quality.

Subloop unbundling destabilizes the plant and decreases network integrity. Stabilization of Ameritech's current plant has been designed to limit the craft field activity required in the normal service activation process. This is accomplished by sizing FDI's to accommodate specific numbers of distribution and feeder facilities based on the number of living units or business customers served, and a forecast of expected service demand. Thus, any spare feeder facility can be easily connected to any distribution pair thereby reducing both the number of field locations visited per dispatch as well as reducing the number of dispatches required. Many times there is no provision for additional feeder facilities to enter these sites as would be required to afford interconnection capability to a CLEC.

For the last several years, both RT sites and FDI's have been designed using pre-connectorized cables to reduce the costs associated with installation of these loop elements. This pre-connectorization further complicates interconnection from alternate sources of feeder facilities in the case of RT sites, as the distribution emanating from the RT is effectively "hard wired" to the DLC equipment. In the case of FDI's, the preconnectorized cables occupy all of the cross-connect capability in the FDI precluding the introduction of any additional facilities.

Subloop unbundling will lead to increased levels of plant rearrangement in fixtures and splices to accommodate the various interconnector requests. Studies have shown that the level of rearrangement and change in fixtures and splices correlates directly with customer trouble reports. Thus, the increase in OSP work required to implement subloop unbundling decreases network integrity.

Operational Issues

The manual work related to capacity provisioning (i.e., the planning and engineering associated with unbundled subloops), service activation (i.e., the initial provisioning of unbundled subloops), and service assurance (i.e., the ongoing proactive and reactive maintenance of those subloops) and its associated costs will be greater for subloop unbundling than for loop unbundling.

Subloop unbundling increases capacity provisioning costs. If use of subloops by CLECs is mandated, basic planning and engineering guidelines must be modified in order to ensure that all new growth investments allow for the possibility of CLEC demand at various interconnection points in the loop. For existing plant, as requests for entry are received by the ILEC, an engineer must study the particular network configuration in order to determine and document work required to enable the CLEC access to the plant requested (e.g., distribution plant from a cross-box to the customer's premises). It can take anywhere from hours to days for an engineer to analyze and draft an engineering work order.

Subloop unbundling increases service activation costs. A key factor which would contribute to increased work and cost for provisioning a service request centers around field dispatches required to visit the subloop interconnection points. Of all the work associated with service activation, outside plant craft work is second in cost to order negotiation for bundled loops. The fact that this cost has been contained is due to Ameritech's continued efforts to stabilize its plant through judicious use of rehabilitation and dedicated outside plant, thus reducing outside craft visits. Ameritech is currently experiencing a 20% dispatch rate for all bundled services (21% of service activation costs). In Illinois and Michigan, where unbundled loops have been offered, the dispatch rate has been as high as 36% (25% of service activation costs). However, with a required dispatch rate of 100% for subloop activation, the proportion of activation costs associated with outside dispatch rises to 46%. Overall, the total service activation cost per service request for a subloop is 53% higher than a similar request for an unbundled customer premises to MDF loop. This increase is in spite of the fact that other work is eliminated (e.g., placing a cross-connect from the MDF to the interconnector's equipment).

Subloop unbundling increases service assurance costs. Currently, bundled telephone services benefit from automated testing systems that can quickly verify impairments and guide the dispatch of a technician to the fault location. Unbundling loops limits the availability of automated testing because the imbedded testing systems require access to the loop at the ILEC switch, which is unavailable in the unbundled loop. However, the appearance of the unbundled loop in a central office provides access for testing (with technician involvement or new access equipment required). Unbundled subloop elements will require a technician dispatch to a field site for every trouble report received from the interconnector. Even in the ideal case, where the interconnector employs testing systems and procedures equal to the ILEC, complexity and cost are increased. For example, for a fault near the subloop interface, even the best testing system cannot accurately identify whether the fault is in the ILEC's facility or in the interconnector's facility. In cases where the interconnector is unable to provide testing because no test system is available, or digital architectures that limit testing are used, maintenance costs and time to repair may be significantly increased. Multiple dispatches may be necessary to enable a technician with the required training and equipment to be sent to the fault location, and coordinated joint testing may be needed.

Without remote testing, costly dispatches will be required to clear cases of "no trouble found." The current percentage of "no trouble found" trouble reports in Ameritech is 37% of OSP trouble reports. At a per dispatch time of 2 1/2 hours, the impact of dispatches resulting in no trouble found is significant. Additionally, to ensure security and network integrity, an Ameritech dispatch is necessary for all trouble reports where the interconnector requires access to the interconnection point for testing. This requires costly coordinated dispatches when there may be no fault in the Ameritech network.

A scenario was constructed to examine the cost increases resulting from work involved in resolving a trouble report. Based on Ameritech's current processes and experience to resolve troubles reported in unbundled loops, the average cost for the service assurance process will increase by a factor of about 56% for subloop unbundling over the cost of that for unbundled loops.

Operation Support Systems Issues

Subloop unbundling requires either expensive modifications to existing OSSs or labor intensive manual work-arounds. Timely and cost-effective engineering, provisioning, and administration of subloop elements may require significant enhancements to Ameritech's OSSs above and beyond those required for loop unbundling. The scope of these enhancements and the timing of their implementation will depend on the type and configuration of subloop elements being offered, and the volume and frequency of the requests. Whereas manual work-arounds may be viable for a small volume of requests, a mechanized approach will be more effective at higher volumes.

While no complete determination of the cost and timing of the necessary software system enhancements has been completed to date, preliminary examination shows that current system functionality will need to be enhanced to handle entry, storage, display, and communication of subloop location information. Consider, for example, changes in the service order flow-through process (i.e., the ability to provision service requests with no manual OSS intervention). The loop assignment system (LFACS) currently assumes a loop connecting the central office to the customer premises. It has limited ability to stop or start assignments mid-loop. In order to receive meetpoint and meetpoint location information and assign to those meetpoints, it may require LFACS to be fully rearchitected, or replaced, at considerable expense and time. In addition, in cases where digital loop electronics are involved, administratively difficult and costly preallocation of facilities may be needed.

Similarly, the interface between the service order administration and the assignment function (SOAC to LFACS) would need to be extended to handle other than F1 loop information. SOAC would need to be able to send this information to the circuit connectivity location and equipment inventory database (NSDB) which would also need to be enhanced to store and display loop information other than F1 feeder plant. If digital loop electronics are involved (and are being modeled in the central office equipment inventory system (SWTCH)), then SOAC needs to send the meetpoint and meetpoint location information to SWTCH as well.

In situations where the CLEC is providing the distribution portion of the loop to the customer premises, there may also be an impact on any systems currently containing a "living unit" field (e.g., ACIS SAG). These systems may need to be able to distinguish between both the CLEC's meetpoint with the CLEC and the actual customer location. ACIS SAG, SOAC, LFACS and other related systems would have to be studied to better understand this impact. Also, LFACS would need to be enhanced to accept pre-specified F1 loops from the CLEC.

Subloop unbundling also significantly complicates capacity planning. The loop planning system (LEIS) currently assumes an end-to-end loop. Its complex timing and sizing algorithms may require enhancements to handle spare capacity allocation and ownership assignment for subloop components.

In addition to the direct cost of enhancements of the OSSs, other related costs for subloop unbundling can be expected to be incurred. For example, the development of new or changed methods and procedures associated with system modifications and the associated training of technicians and other craft employees on these enhancements must also be considered.

As mentioned earlier, manual work-arounds would be necessary if the OSS enhancements are not undertaken. For example, each order would have to be coded for manual intervention by craft employees who would have to access each system in order to update and activate information. Such work-arounds would be required not only for each circuit set-up, but for all changes and disconnects as well. High flow-through has been essential for Ameritech to achieve its cost and quality objectives. Increasing the quantity of manual work-arounds is directly in conflict with these objectives.

Conclusion

This document identifies and examines issues associated with offering unbundled subloop elements in the Ameritech network. These issues are over and above those for intact loop unbundling, which Ameritech currently offers. Examination of these issues reveals that subloop unbundling will create enormous technical, administrative, and operational challenges that need to be contained by judicious limitation of subloop interconnection by the FCC.

11

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James K. Smith
Director
Federal Relations

January 22, 1997

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JAN 22 1997

Federal Communications Commission
Office of Secretary

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, NW
Room 222
Washington, DC 20554

Re: **Ex Parte Statement**
CC Docket 96-98 and Docket 97-1

Dear Mr. Caton:

On January 21, 1996, Mr. Dan Kocher, Ms. Kristin Shulman and I met with members of the Policy and Program Planning Division. The attached material was used as part of our common transport discussion and should become part of the 251 record. Pursuant to staff's request, this material is also being entered into the record for CC Docket 97-1.

Sincerely,

James K. Smith

Attachment

cc: R. Welch
D. Stockdale
M. Waksman
B. Olson
D. Ellen
V. Gutta
K. Gude
C. Brown
L. Gelb

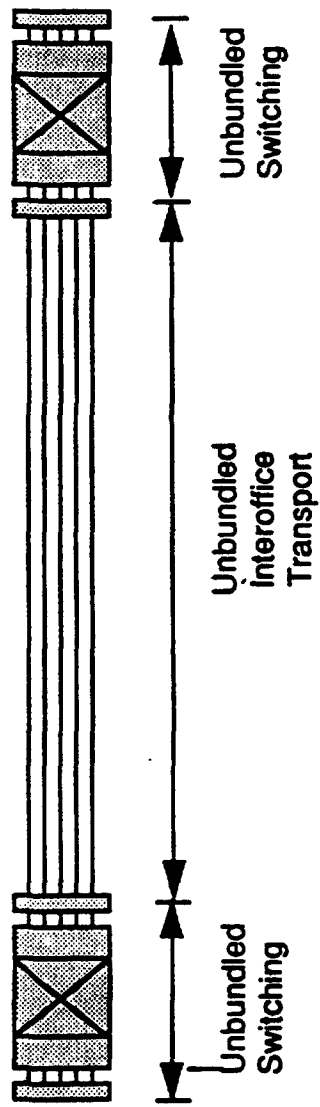
Unbundled Network Elements

Dedicated and Shared
Transport

'96 Act Requirements

- Access to Network Elements (251(c)(3))
- Resale - Network Services at Wholesale Rates(251(c)(4))
- Checklist - Local Transport Unbundled from switching (271(c)(2)(B)(v))

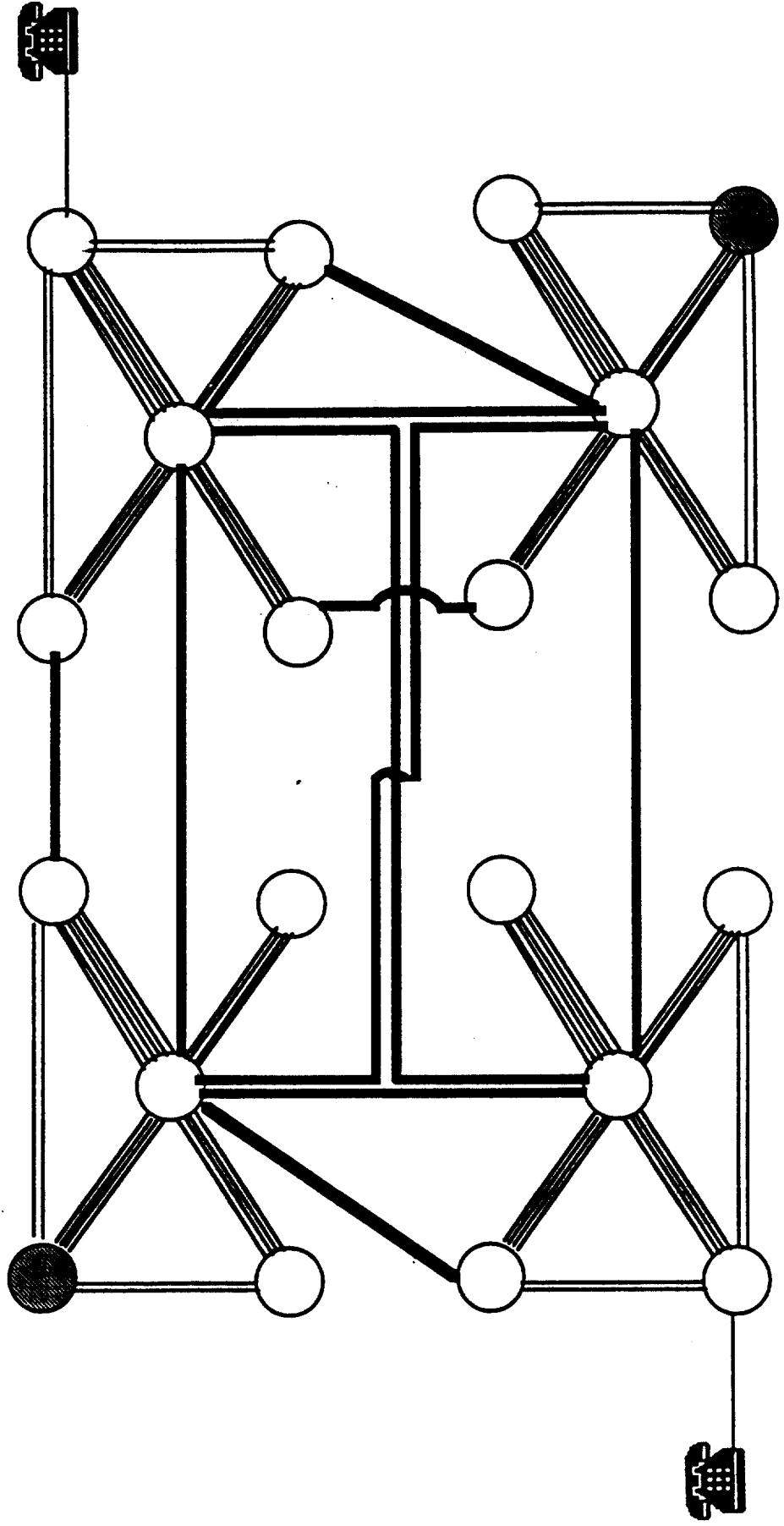
Network Element Concepts



“Common” Transport

- Loosely used Term
- Conceptually used to describe basic network connectivity
- Used to Support all Services
- Available as Switched Access and wholesale toll or local usage

Wholesale Network Services



Wholesale Services

- Discounts on services offered to retail customers
- Offered at Wholesale Prices:
$$\text{Retail Price} - \text{Avoided Costs} = \text{Wholesale Price}$$
- Carrier Access Services classified as a Wholesale services.

Common Transport

- Was a Part 69 Defined Rate Element, Now Called Tandem Switched Transport
- Is not a discrete network element, simply uses the existing public switched network
- Integral part of the Public Switched Network requiring hundreds of components used in “common”.
- Inextricably intertwined with switching, not “transport unbundled from switching”